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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/010,104	11/08/2001	Ajith Kumar Narayanan	JP920000287US1	5408

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EXAMINER

LE, JOHN H

ART UNIT PAPER NUMBER

2863

DATE MAILED: 11/04/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

10/010,104

**Applicant(s)**

NARAYANAN, AJITH KUMAR

**Examiner**

John H Le

**Art Unit**

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 21 October 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-16, 21 and 22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-16, 21 and 22 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 February 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☒ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>11/01, 8/02, 2/03</u> | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Election/Restrictions***

1. Applicant's election with traverse of group I, claims 1-16, 21-22 in Paper mailed on 10/21/2004 is acknowledged. Claims 1-16, 21-22 are remained for examination. Accordingly, claims 17-20 are cancelled from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.
2. Applicant's election with traverse of group I, claims 1-16, 21-22 in Paper mailed on 10/21/2004 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

The requirement is still deemed proper and is therefore made FINAL.

### ***Priority***

3. Acknowledgment is made of applicant's claim for foreign priority based on an application filed in Singapore on 11/27/2000. It is noted, however, that applicant has not filed a certified copy of the foreign priority application as required by 35 U.S.C. 119(b).

### ***Claim Objections***

4. Claims 4, 9, 11, and 12 are objected to because of the following informalities:

Claim 4, line 3, after "UWB", insert --(Ultra Wide Band)--.

Claim 9, line 1, after "RF", insert --(radio frequency)--; line 2, after "IR", insert --(infrared)--.

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Claim 11 recites the limitation "said controller device" in 7. There is insufficient antecedent basis for this limitation in the claim.

Claim 12, line 3, after "UWB", insert --(Ultra Wide Band)--.

Claim 16, line 1, after "IR", insert --(infrared)--; after "RF", insert --(radio frequency)--.

Appropriate correction is required.

***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1-2, 4, 11-12, 21-22 are rejected under 35 U.S.C. 102(b) as being anticipated by Cunningham et al. (USP 4,433,382).

Regarding claim 1, 11, and 21, Cunningham et al. disclose an apparatus for automatically adjusting the programmed location of a robot arm, comprising: a controller device (35, 36, 38), one or more target devices (robot arm) in communication with said controller device (Col.3, line 65-Co.4, line 7); and one or more selecting devices (actuators), each of which is movable relative to said target devices (Col.4, lines 2-7, Col.6, lines 51-58); means for sensing position and orientation to provide data therefor (e.g. Col.6, lines 1-25); means for generating at least one control signal, incorporating said position and orientation

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data, in response to a user input (e.g. Col.6, lines 1-27); and means for transmitting said control signals via at least one of a plurality of communication resources to said controller device (e.g. Col.6, lines 28-42); said controller device acquires and stores actual location information for each target device (e.g. Col.4, lines 63-67), and assesses correspondence of said position and orientation data with said actual location data, and if there is correspondence, outputs a control signal to select said target device to be operative (e.g. Col.6, lines 1-27).

Regarding claims 2 and 22, Cunningham et al. disclose said controller assesses correspondence from the selecting device position and orientation and said actual target location by deriving a target orientation, and determining correspondence of said target orientation with said orientation data (e.g. Col.6, lines 51-67).

Regarding claims 4 and 12, Cunningham et al. disclose said position sensing means comprises an accelerometer whose output is doubly integrated to give an output of position (e.g. Col.9, lines 27-47).

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

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8. Claim 11 is rejected under 35 U.S.C. 102(e) as being anticipated by Flood (USP 6,630,915).

Regarding claim 11, Flood discloses a wireless transmission system for transmitting data to a simulation (Fig.1), comprising: means for sensing position and orientation (sensor 15) to provide data therefor (e.g. Col.3, lines 24-36, Col.4, lines 50-60); means for generating at least one control signal (processor 17), incorporating said position and orientation data, in response to a user input (5) (Col.5, line 63-Col.6, line 5); and means for transmitting said control signals via at least one of a plurality of communication resources to said controller device (Col.6, lines 6-9).

Regarding claim 12, Flood discloses said position sensing means comprises an accelerometer whose output is doubly integrated to give an output of position (e.g. Col.4, lines 50-60).

Regarding claim 13, Flood discloses said orientation sensing means comprises a gyroscope (e.g. Col.4, lines 50-60).

Regarding claim 14, Flood discloses a pointing means to line up a said target device (e.g. Col.6, lines 42-42-61).

Regarding claim 15, Flood discloses said transmitting means is wireless (e.g. Col.2, lines 54-57, Col.5, lines 26-30).

Regarding claim 16, Flood discloses wireless communication is either IR or RF type (e.g. Col.5, lines 32-33).

***Claim Rejections - 35 USC § 103***

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9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 5-6, 8-10, 13-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cunningham et al. (USP 4,433,382) in view of Butnaru (USP 5,966,680).

Regarding claims 5 and 13, Cunningham et al. fail to disclose said orientation sensing means comprises a gyroscope.

Butnaru discloses said orientation sensing means comprises a gyroscope (Col.5, lines 20-22).

Regarding claims 6 and 14, Cunningham et al. disclose each selecting device includes a pointing means to line up a said target device (e.g. Col.3, lines 41-48).

Regarding claims 8 and 15, Butnaru discloses communication between said selecting devices and said controller device is wireless (e.g. Col.7, line 66-Col.8, line 4).

Regarding claims 9 and 15-16, Butnaru discloses transmitting means is wireless and said wireless communication is either RF or IR type (e.g. Col.7, line 66-Col.8, line 4).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to include the orientation sensing means comprises a

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gyroscope as taught by Butnaru in an apparatus for automatically adjusting the programmed location of a robot arm of Cunningham et al. for the purpose of providing an artificial labyrinth (Col.1, lines 47-50).

10. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Cunningham et al. (USP 4,433,382) in view of Mukherjee (USP 6,289,263).

Regarding claim 3, Cunningham et al. fail to disclose said orientation data includes angles between a ray joining the respective points in a three-dimensional Cartesian system and two respective axes of said system.

Mukherjee discloses said orientation data includes angles between a ray joining the respective points in a three-dimensional (sphere) Cartesian system and two respective axes of said system (e.g. Figs.3-4, Col.2, lines 59-65, Col.6, lines 30-65).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to include angles between a ray joining the respective points in a three-dimensional Cartesian system and two respective axes of said system as taught by Mukherjee in an apparatus for automatically adjusting the programmed location of a robot arm of Cunningham et al. for the purpose of providing a feedback control strategy for the control of both position and orientation coordinates of the spherical robot (Col.2, lines 59-65).

11. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Cunningham et al. (USP 4,433,382) in view of Escobosa (USP 5,963,145).

Regarding claim 7, Cunningham et al. fail to disclose said pointing means is a display, printed indicium, or pointed shape.



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Escobosa discloses said pointing means (cursor) is a display, printed indicium (Col.3, lines 2-7), or pointed shape (Col.4, lines 33-36).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to include pointing means is a display, printed indicium, or pointed shape as taught by Escobosa in an apparatus for automatically adjusting the programmed location of a robot arm of Cunningham et al. for the purpose of providing a system for providing wireless pointer control for controlling electronic equipment (Escobosa, Abstract).

**Contact Information**

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to John H Le whose telephone number is 571-272-2275. The examiner can normally be reached on 8:00 - 4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John E Barlow can be reached on 571-272-2269. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

  
John Barlow  
Supervisory Patent Examiner  
Technology Center 2800

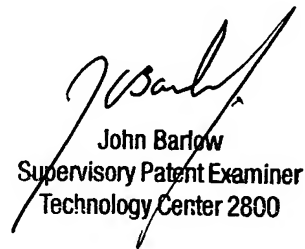
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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

John H. Le

Patent Examiner-Group 2863

October 30, 2004



John Barlow  
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